

# PCDHGA7 (L-13): sc-109389

## BACKGROUND

Protocadherins are a large family of cadherin-like cell adhesion proteins that are involved in the establishment and maintenance of neuronal connections in the brain. There are three protocadherin (PCDH) gene clusters, designated  $\alpha$ ,  $\beta$  and  $\gamma$ , all of which contain multiple tandemly arranged genes. PCDHGA7 (protocadherin  $\gamma$ -A7) is a 932 amino acid that is one of 22 proteins encoded by the protocadherin  $\gamma$  cluster. The protocadherin  $\gamma$  cluster consists of three subfamilies (A, B and C) and PCDHGA7 is a member of the  $\gamma$  subfamily A. PCDHGA7 is a type I transmembrane receptor containing six cadherin motifs and is expressed in the central nervous system where it localizes to synapses. Members of the  $\gamma$  cluster of protocadherins are essential for neuronal survival. There are two isoforms of PCDHGA7 that are produced as a result of alternative splicing events.

## REFERENCES

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3. Tasic, B., et al. 2002. Promoter choice determines splice site selection in protocadherin  $\alpha$  and  $\gamma$  pre-mRNA splicing. *Mol. Cell.* 10: 21-33.
4. Wang, X., et al. 2002.  $\gamma$  protocadherins are required for survival of spinal interneurons. *Neuron* 36: 843-854.
5. Kirov, G., et al. 2003. Variation in the protocadherin  $\gamma$  A gene cluster. *Genomics* 82: 433-440.
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## CHROMOSOMAL LOCATION

Genetic locus: Pcdhga7 (mouse) mapping to 18 B3; Pcdhga7 (rat) mapping to 18p11.

## SOURCE

PCDHGA7 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PCDHGA7 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109389 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PCDHGA7 (L-13) is recommended for detection of PCDHGA7 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PCDH family members.

Suitable for use as control antibody for Pcdhga7 siRNA (m): sc-152094, Pcdhga7 shRNA Plasmid (m): sc-152094-SH and Pcdhga7 shRNA (m) Lentiviral Particles: sc-152094-V.

Molecular Weight of PCDHGA7: 102 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.